SRM350

Active 2-Way Sound Reinforcement Speaker System

SRM350

■ The Mackie SRM350 is a full-range, portable, active loudspeaker system providing high-output, wide-dispersion, and low distortion performance in a compact, composite molded enclosure. Two amplifiers independently power a high precision 10-inch professional woofer and 1.4-inch diaphragm titanium compression driver with a 1-inch exit throat. A sophisticated electronic control system provides phase correction, crossover, and five modes of thermal and active system protection.

■ The SRM350 is fitted with a specially designed horn assembly that combines both an exponential and conical geometry. The result is super smooth, low-distortion linear audio performance across the entire specified coverage angle of 90 degrees.

■ Careful attention has been given to the ergonomic features of the system. The center of gravity, handle locations, handle design, position of fly-points, and ease of use have been carefully thought out. There is also an integrated pole mount on the bottom of the cabinet and a weather-resistant steel grille. The asymmetrical trapezoidal cabinet has been designed to provide an ideal floor monitoring position.

■ The SRM350 features a number of unique controls including a mic/line switch, level control, combination XLR/TRS input jack for mic- and line-level inputs, XLR thru-jack to daisy-chain the signal to another speaker, and a contour switch for low-level or background-level sound reinforcement applications.

■ The SRM350 cabinet is constructed of high pressure injected polypropylene. The enclosure features ample amounts of reinforcement ribbing and structural strengthening resulting in a strong, super-rigid design providing ideal acoustical characteristics.

Features

- **Bi-amplification with 165 watts rms low-frequency and 30 watts rms high-frequency power**
- **121 dB peak SPL**
- **Wide dispersion, studio-quality high-frequency horn**
- **Large format exponential/conical high-frequency horn mouth**
- **State-of-the-art precision 1.4-inch titanium compression driver**
- **10-inch high-efficiency, light mass woofer**
- **Single mic/line level control**
- **Contour switch provides ideal low-to-medium level music playback equalization**
- **Complete electronic and component protection circuitry**
- **Electronic equalization and phase alignment**
- **Professional trapezoidal enclosure design**
- **Built-in pole mount cup on bottom**
- **Tilts on its side for use as a stage monitor**
- **Correctly weight-balanced with comfortable side handle for easy carrying and set up**

Applications

- Live and playback applications
- Small to medium sized portable PA systems
- Corporate events
- Houses of worship

SRM350 Active Speaker System

SRM350 Specifications

System Acoustic

Frequency Response (–3 dB)	83 Hz -18.5 kHz
Frequency Range (–10 dB)	61 Hz - 22 kHz
Max SPL Long-term	118 dB
Max SPL Peak	121 dB
Crossover	Linkwitz-Riley, 24 dB/octave @ 2400 Hz

Audio

Input	Bal./unbal. female combination XLR/TRS
Loop-through (parallel w/input)	Bal./unbal. Male XLR
Input Protection	RFI and level protected
Level Control	Rotating knob (off to +45 dB)
Sensitivity (center detent)	Line: +4 dBu Mic: –36 dBu
Maximum Input Level	+22 dBu
Acoustic Contour Equalization (peaking)	+3 dB @ 100 Hz +3 dB @ 12 kHz
Accessory Interface	±15 VDC, normalized signal I/O
Operating Temperature Range	–10°C to 45°C (14°F to 113°F)

Amplifiers

Total Amplifier Power	195 watts continuous*
High Frequency	30 watts*
Type	Class H
Rated THD	.03%
Low Frequency	165 watts*
Type	Class H
Rated THD	0.03%

*Rated power is continuous rms wattage into transducer's rated impedance @ 1 kHz for the HF amplifier and @ 100 Hz for the LF amplifier

High Frequency Section

Diaphragm Size	1.4 in/36 mm
Horn Exit Diameter	1.0 in/25 mm
Power Handling	75 watts rms (long term)[1]
Sensitivity	104 dB (1W@1m)
Frequency Range	1000 Hz to 20 kHz
Nominal Impedance	16 ohms
Diaphragm Material	Titanium
Magnet Type	Ferrite

Horn Design

Horizontal Coverage	90° 1 kHz to 20 kHz avg.
Vertical Coverage	80° 1 kHz to 20 kHz avg.
Type	Exponential and conical
Mouth Size	11.1 in x 6.1 in/ 283 mm x 154 mm
Throat size	1.0 in/25 mm

Low Frequency Section

Number of Drivers	1
Woofer Diameter	10 in/250 mm
Voice Coil Diameter	2.0 in/51 mm
Power Handling	250 watts rms (long term)[1]
Sensitivity	96 dB (1W@1m)
Frequency Range	61 Hz to 3000 Hz
Magnet Type	Ferrite

Construction Features

Basic Design	Asymmetrical Trapezoidal
Material	Polypropylene
Finish	Grey, textured finish
Handles	One on side, one on top
Grille	Perforated metal with weather-resistant coating

Line Input Power

Power Consumption	120W with musical program and Limit LED blinking
US Recommended amperage service	120 VAC, 60Hz 2.5 amps
Europe Recommended amperage service	230 VAC, 50Hz 1.25 amps
Japan Recommended amperage service	100 VAC, 50/60Hz 3.0 amps
AC connector	3-pin IEC 250 VAC

Control System Function

Electronic Crossover
Phase Alignment
Equalization
Parametric equalization

Safety Features

Protection	Low Frequency Dynamic Bass Protection, Power Supply and Amplifier Thermal Protection
Display LEDs	Signal Present, Limit, Power ON

Physical

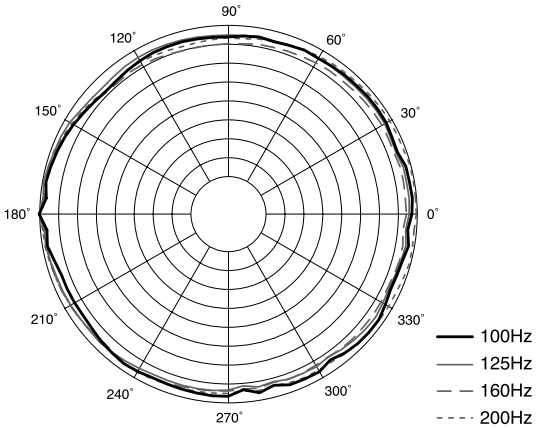
Height	20.75 in/527 mm
Width	13.10 in/333 mm
Depth	12.25 in/311 mm
Weight	32.0 lb/14.5 kg

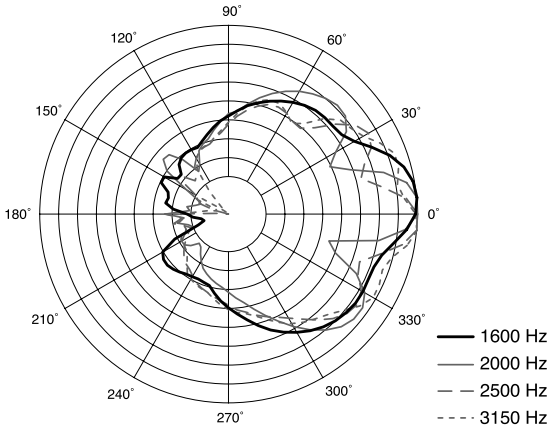
Options

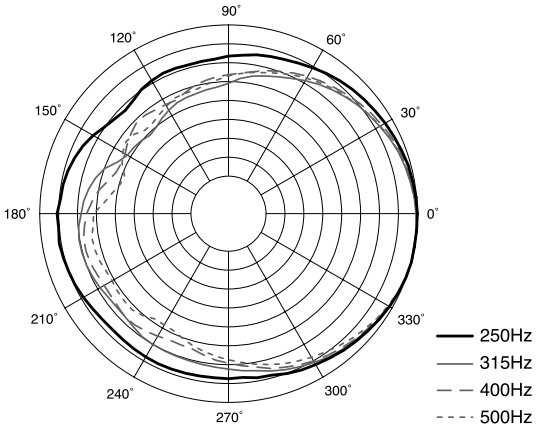
Accessory plate for top and bottom of enclosure for rigging

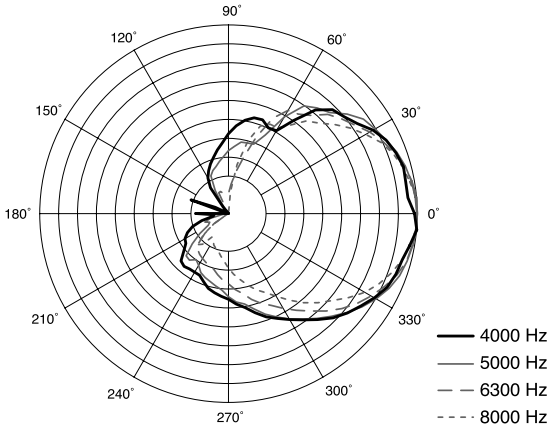
[1] Measured on-axis in the far field, referenced back to 1 watt rms from maximum power and to 1 meter distance using the inverse square law.

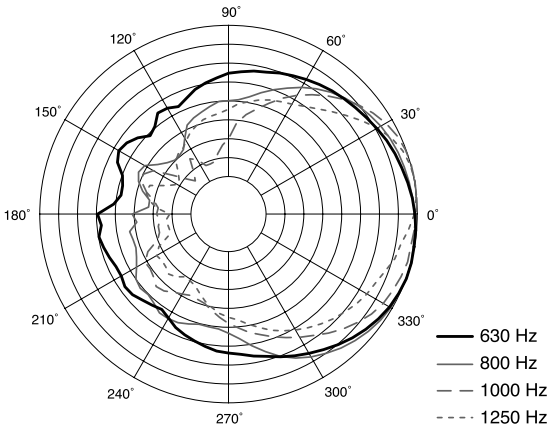
SRM350 Vertical Polars

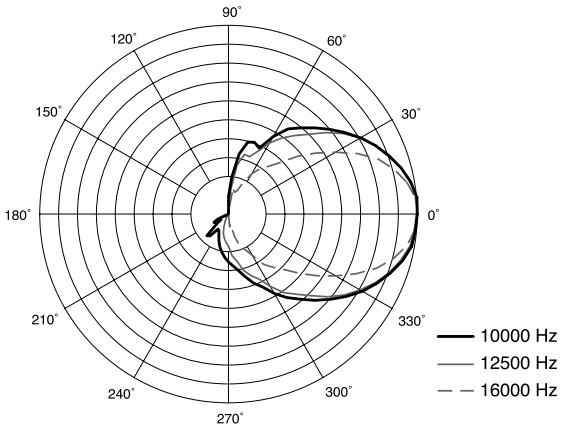






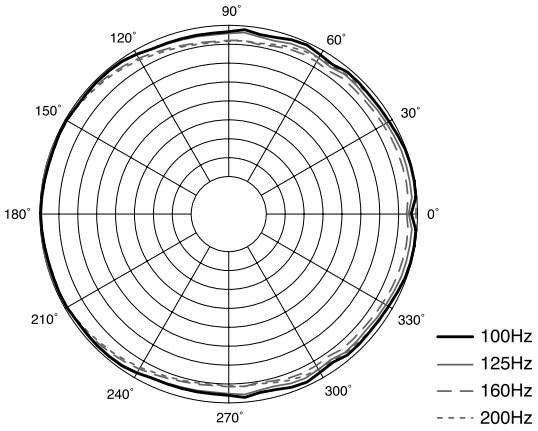


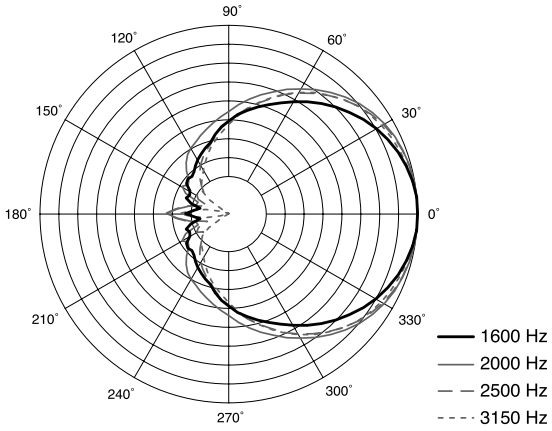


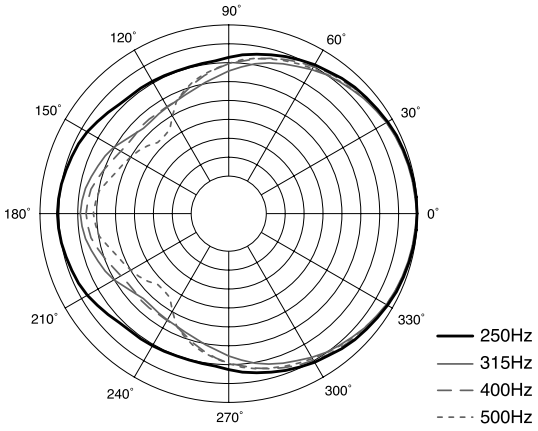


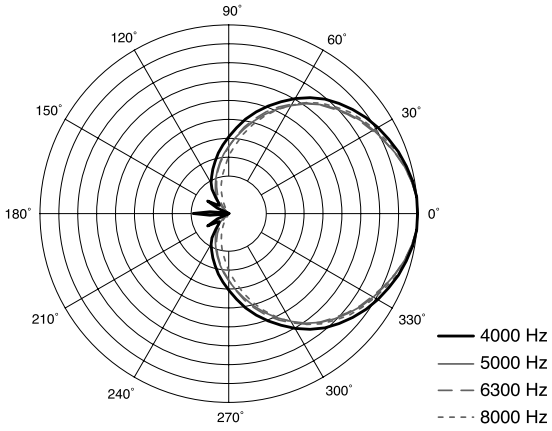
(Chart Scale = 3 dB / division)

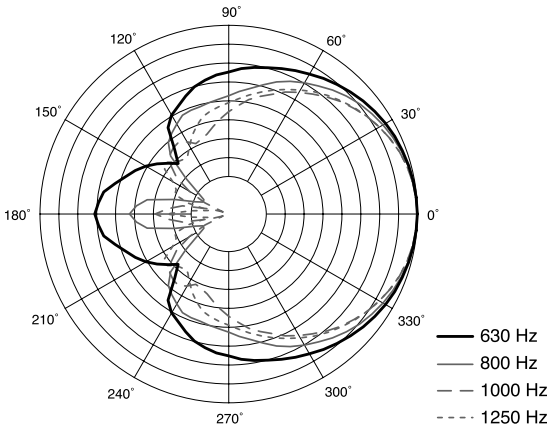
SRM350 Horizontal Polars

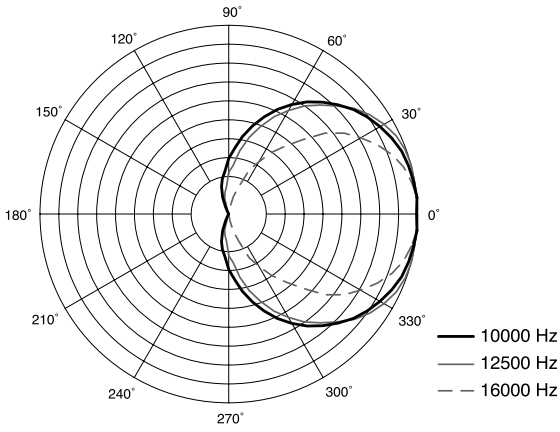












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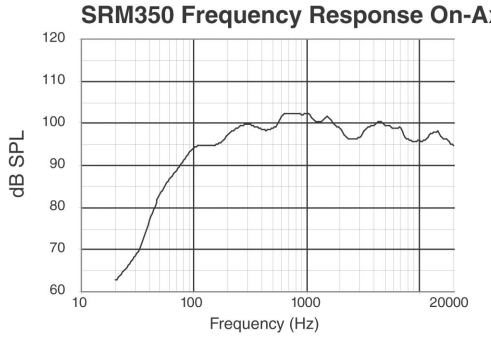
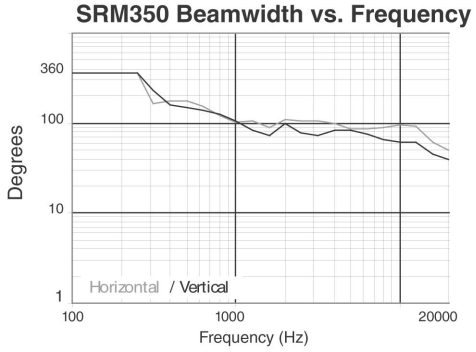
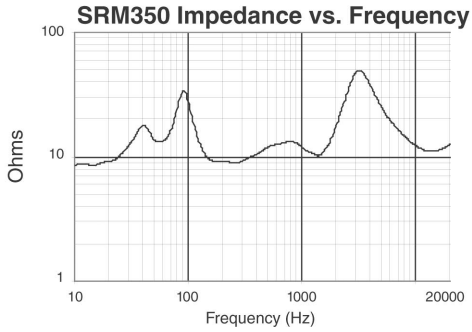
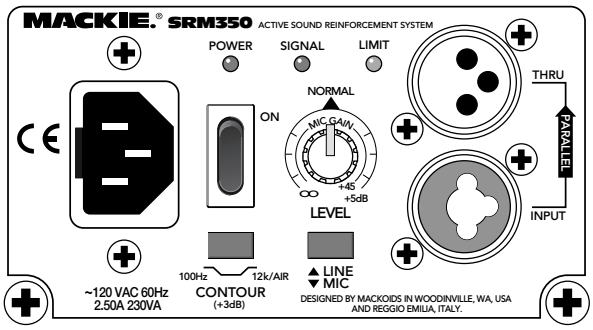


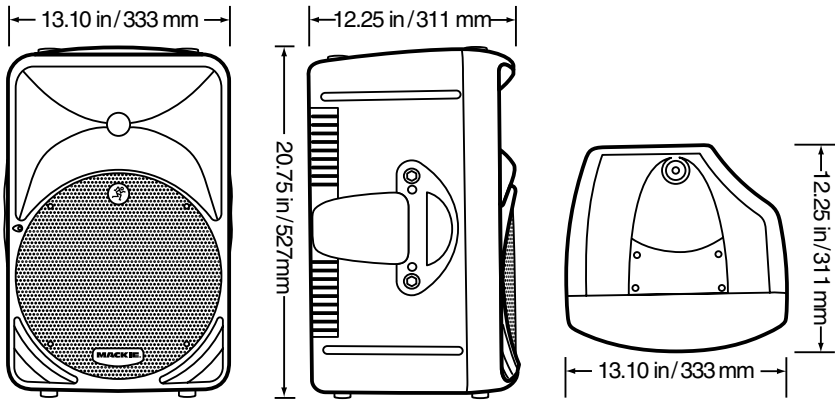




SRM350 Input Panel



SRM350 Dimensions



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SRM350 Active Speaker System

Architects' and Engineers' Specifications

The active two-way, full-range loudspeaker system shall incorporate one 10-inch low-frequency (LF) transducer and a 1-inch exit/1.4-inch diaphragm compression driver high-frequency (HF) transducer. The LF driver shall be mounted in a vented polypropylene molded enclosure tuned for optimum low-frequency response. The HF transducer shall be loaded on a multi-cell horn aperture and mounted on a combination exponential and conical horn.

The system shall have a nominal coverage pattern of 90° (horizontal) x 80° (vertical). System frequency response shall vary no more than ±3 dB from 83 Hz to 18.5 kHz measured on axis. The loudspeaker shall incorporate a Class H low-frequency amplifier capable of delivering 165 watts rms over a frequency range of 20 Hz–2500 Hz. The system shall incorporate a Class H 30 watt rms amplifier specifically designed to power the HF driver over the range of 2000 Hz–20 kHz. The amplifiers shall be mounted on an aluminum heatsink, which shall be mounted on the rear of the speaker system, and shall be convection cooled.

Thermal protection shall be provided by a thermal sensor mounted on the heatsink, which monitors the heatsink temperature and triggers the Active Protection Management System should the temperature exceed a safe operating level. The input signal to the amplifiers shall be reduced until the heatsink cools to a safe operating level, at which point normal operation resumes.

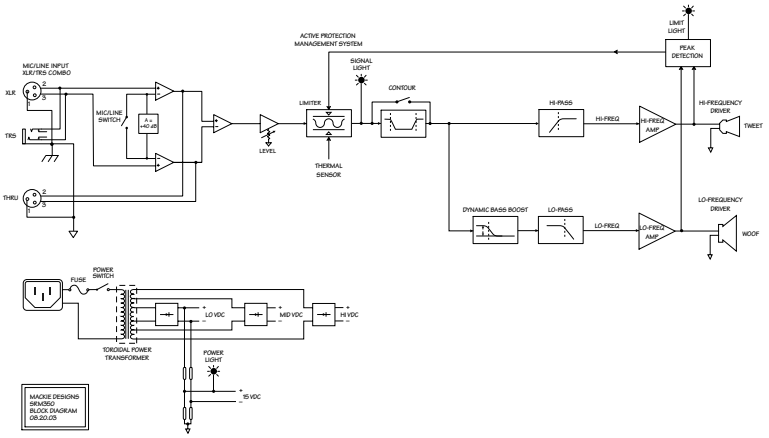
Additional protection shall be provided for both the LF and HF drivers by a compressor circuit, which monitors the low-frequency and high-frequency amplifier outputs and reduces the gain as the amplifiers approach clipping.

The system shall include a combination XLR/TRS input connector, an XLR loop-through signal connector, a level control capable of providing up to 45 dB of gain, a mic/line switch to accomodate both microphone and line-level signal levels, and a sound contour switch providing +3 dB of equalization at 100 Hz and 12 kHz.

The loudspeaker enclosure shall have an asymmetrical trapezoidal shape and shall incorporate a side handle and a top relocation handle. The enclosure shall be molded from polyproylene material. The front of the loudspeaker shall be covered with a powder coated, weather-resistant perforated steel grille.

The active two-way full-range loudspeaker system shall be a Mackie SRM350.

SRM350 Block Diagram



Electronic files for this product available at: www.mackie.com

This Specification Sheet	SRM350_SS.PDF
Owner/Operator's Manual	SRM350_OM.PDF

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MACKIE®
www.mackie.com
16220 Wood-Red Road NE, Woodinville, WA 98072 USA
800.898.3211, fax 425.487.4337, sales@mackie.com
UK +44.1268.570.808, fax +44.1268.570.809, uk@mackie.com

Part No. 0013221 Rev. A 09/04